

REMARKS

The amendment of claims 1, 5 and 7 to recite that the feed additive "consists essentially" of the identified components is supported, for example by the best mode of practicing the invention as described in pages 10-13 of the specification and on page 9, lines 18-24. This disclosure indicates that while an aqueous solution or suspension may be employed in the preparation of the additive providing for the presence of water and a hydrophilic emulsifier, the use of such an aqueous composition in preparing the additive is not necessary. Thus, the presence of water and a hydrophilic emulsifier are optional, is now recited in claims 1, 5, and 7 and their dependent claims.

The insertion into claims 5 and 7 that the diameter of each oil microglobule has a diameter of no more than 50 μm is supported on page 4, five lines from the bottom, in the specification. The other amendments of the claims are for the purpose of improving their form, and are self-explanatory.

Reconsideration fo the application, as amended, is respectfully requested.

Claims 1-4 have been rejected under 35 U.S.C. 112, first paragraph, on the grounds that the specification does not provide enablement for the recitation in the claims of a substance "activating biological functions" in fish and shellfish. It is submitted, however that the various substances for activating the different biological functions in fish and shellfish are well known in the art and that the gist

of the present applicant's invention does not rest on the identification of such substances but on the form in which they were administered. Thus, as far as the applicant is aware, all of these substances are operable in the invention as long as they are suitable for oral ingestion with the feed consumed by the fish or shellfish. In short, there is sufficient enablement for the claimed substances in view of general knowledge in the art.

Claims 5, 6, 7 and 9 have been rejected under 35 U.S.C. 112, second paragraph as indefinite in the recitation in independent claims 5 and 7 of the phrases "pretreating for . . ." and "myriads of . . .", the reference to a pretreatment in claim 9 and the lack of antecedent for "wherein the stirring is performed" in claim 6. It is believed that this rejection has been overcome by the deletion of the phrases "pretreating for" and "myriads of" from claims 5 and 7, the deletion of "in the pretreatment step" from claim 9, and the insertion of a reference to "stirring" in claim 5.

Claim 1-4 have been rejected under 35 U.S.C. 102(b) as being anticipated by Villamar et al.(WO 02/00035) which discloses a bioactive food complex for controlling disease in aquatic animals comprising a solids-in-oil or oil-in-solids first emulsion that is itself emulsified in an oil-in-polymer or solids-in-polymer emulsion complex as a second emulsion. Bioactive compounds such as probiotics and quorum sensing inhibitors such as inhibiting furanones may be present in both the disperse and continuous phase of the bioactive food complex. The polymer may

be a hydrocolloid polymer such as an alginate or carrageenan polymer which is ionically cross-linked to form a stable gel matrix. As stated in the Office Action, Villamar et al. discloses on page 17 microcapsules 20-200 μ in size.

The product and process of the present invention differ from the disclosure of Villamar et al. primarily in that such product and process do not require an ionically cross-linked polymer to work effectively in the treatment of fish and shellfish. It is submitted therefore that the rejection of claims 1-4 as anticipated by Villamar et al has been overcome by the amendment of claim 1 to recite that the feed additive "consists essentially" of the edible oil which embeds a substance activating biological functions in the living organism of the fish and shellfish, and a lipophilic emulsifier, and that the composition optionally also contains water and a hydrophilic emulsifier. Such a claimed composition, which excludes an ionically cross-linked polymer, is not disclosed by Villamar et al.

Claims 5-9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Villamar et al. It is believed that this rejection by has been overcome by the amendment of claims 5 and 7 in a manner similar to the amendment of claim 1 that the feed additive "consists essentially" of certain components and therefore excludes the use of an ionically cross-linked polymer required in the method of Villamar to obtain a physically stable matrix. It is noted that there is nothing in the disclosure of Villamar et al to suggest to a person having

ordinary skill in the art that a satisfactory bioactive food complex can be obtained without the use of such an ionically cross-linked polymer.

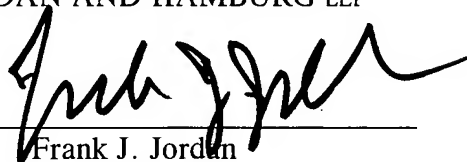
Claim 1-9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Melvin et al. (WO 02/38770), which discloses a process for producing a vaccine for use against infectious pancreatic necrosis virus (IPNV) comprising culturing a yeast host cell which expresses an IPNV polypeptide as a vaccine. The vaccine may be in the form of a fish oil with an emulsifier suitable for being administered in fish food. However, Melvin et al. has no suggestion that the oil globules containing the biologically active substance should have a size not above 50 μ m, preferably not above 10 μ m, since oil globules of this size containing the biologically active substance are most easily ingested by fish and shellfish, as pointed out on page 4 of the specification. Furthermore, Melvin et al. also has no teaching that the oil globules containing the biologically active substance should advantageously be in emulsion or suspension form as recited in claims 3 and 6 as amended, since this ensures that the globules are uniformly dispersed and retain their spherical shape, which further ensures that they are more easily taken up by the fish or shellfish, as pointed out on page 7, lines 6-14 of the specification.

Applicant respectfully requests a one month extension of time for responding to the Office Action. Please charge the fee of \$60.00 for the extension of time to Deposit Account No. 10-1250.

This application is now thought to be in condition for allowance and such action at an early date is earnestly solicited.

Respectfully submitted,

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